

# Marketing of catfish in Iloilo

By **Lorenzo Locara**

Office of the Iloilo Provincial Government  
Iloilo City

Although tasty and distinct, *Clarias* spp. had always been considered a minor fish in Iloilo. Compared to tilapia and milkfish, its marketing remains specialized. Historically, its consumption was limited to those who had acquired a taste for it due largely to folklore that it came out of cemeteries and its propensity to feed on animals floating on waters and ponds.

The traditional market of catfish is the Zarraga municipality, 15 km north of Iloilo City, where catfish are hawked along the road in front of the municipal road, mostly to motorists and passengers of public transport. Catfish was not farmed until the early 1990s.

The endemic *Clarias macrocephalus* has disappeared from the market, maybe due to pesticide poisoning, loss of breeding habitat and overfishing (especially the use of electric rod which can stun the adult but kill juveniles). *C. batrachus* was introduced in the early 1980s and had established itself in the province but its tough, rubbery and yellow-colored meat was not accepted by catfish eaters.

The introduction of African catfish *C. gariepinus* in the early 1990s, helped revive the dying catfish industry. It also helped farmers of Zarraga survive the worst of El Nino in 1997 when rice farming was not possible. While decades before, catfish (mostly *C. macrocephalus*) supply from the wild was erratic, farmed *C. gariepinus* is now a daily offering. Small farmers growing the fish in ponds as small as 20 m<sup>2</sup> deliver their produce to hawkers when the fish weigh 200 g or five pieces to a kg.

The conduct of catfish festivals in 1997 and 1998 in the Zarraga Municipal Plaza also helped gain for the fish more popularity, elevating it to gourmet food level. Some restaurants in Iloilo City started offering the

fish, mostly barbecued or cooked in coconut milk with taro leaves and anatto for food color. Afficionados, gourmards and the average Iloilo family started to look for the fish and its demand started to peak. But until now, the fish can be seldom found in public markets except during special occasions such as fiestas and other festivities. The preference of buyers to get their fish live has remained.

## Production

Catfish, mostly *C. gariepinus*, is produced in about 50 ha by more than 400 farmers. The municipalities of Zarraga, New Lucena, Sta. Barbara, Pototan and Dingle are major catfish-producing areas. Almost all these farmers grow the fish in small ponds ranging from 20 to about 2,000 m<sup>2</sup>. Only a few farmers grow the fish in ponds more than one hectare in size.

Estimated volume of production per year is 300 tons. Production is thus a small farm operation and is mostly an income amelioration activity. Catfish and other freshwater fishes caught in the wild, i.e., rivers, streams, swamps and rice farms have dwindled over the years. According to the Iloilo Provincial Agriculture Office, the estimated catch from Iloilo can barely reach 20 tons annually.

The price of catfish has remained high. While the average price per kg of tilapia is P40.00, catfish still sell at P70.00, probably one reason for the continued low demand as an everyday fare. Producers sell the fish at that price due to the high cost of fingerlings and feeds. Commercial catfish feeds cost high and alternatives such as trash fish, abattoir by-products and other protein sources are not regularly available.

## Future trends and other developments

An agreement was signed in September 1999 between the Iloilo Provincial Government and SEAFDEC/AQD to reestablish

the preferred native catfish (*C. macrocephalus*). This paved the way to the eventual return of *C. macrocephalus* to the tables of Iloilo residents. The initial reseedling of Tigum River in the watershed of Maasin restocked the head waters of the river where the fish is hoped to find breeding habitats. Fingerlings washed downstream can grow in ponds, rice farms and other water bodies.

Farmers and cooperators of the Iloilo Provincial Government also received breeders of *C. macrocephalus* hatched and raised by AQD. These breeders will later be used to produce seed stocks for sale or distribution to farmers and for the re-seeding of the other rivers and water bodies of the province.

As part of the agreement, AQD trained five government personnel and one farmer leader in captive breeding and hatchery operation of *C. macrocephalus*. These personnel are now conducting training for interested farmers, entrepreneurs and cooperatives so that hatchery technology can be spread speedily throughout the province.

The farmers and entrepreneurs who were trained have started to raise their own brood stocks of *C. macrocephalus* captured in other islands of the country, particularly Cebu, Leyte, Palawan and Mindanao. This initiative is seen to widen the genetic base of the native catfish in the province, hopefully ensuring the sustainability of the industry.

Meanwhile, the return of the native catfish is eagerly awaited by the catfish-eating population of Iloilo. Those who had missed the fish contend that it is superior in taste to both *C. gariepinus* and *C. batrachus*.

Initial sale by an AQD cooperator, Mr. Thomas Hautea in early 1999 was optimistically received by buyers, even though the fish was sold at P150.00 (US\$3.50) per kg



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was a need for someone to continue working on the nursery stage. The Fermin couple identified Ms. Ruby Bombeo of the Nursery Section to take over. As Catfish Project Leader, Dr. Fermin further invited Mr. Eliseo Coniza and Ms. Mae Catacutan to join the team. Mr. Coniza just finished his Master of Aquaculture degree from the University of the Philippines in the Visayas. Ms. Catacutan of the Feed Development Section formulated the feeds for weaning, nursery and grow-out. Several people from the private sector bought catfish fry and fingerlings as research by-products from the studies of Ms. Bombeo and Mr. Coniza. The following year, a catfish hatchery production unit was created to provide the seeds to private entrepreneurs who would try the culture of the native catfish. With the help of Engr. Zaldy Suriaga of AQD's Engineering Section, a recirculating system especially during incubation of the eggs was put up. While broodstock may withstand polluted water, eggs need clean, pure, flowing water during incubation.

A typical production run at the AQD hatchery shows that fifty 150-200 g females can produce around 150,000 5-day old larvae with a survival rate of 30-70%. The AQD hatchery sells two week-old fry at P0.50 per piece, while the price of

fingerlings range from P1.00 to P2.50 depending on the size.

When word began to spread that AQD can provide the seeds of the native catfish, many in the private sector were enthusiastic. "Imagine the process of research," Dr. Fermin observed, "it took 10 years and it is only now that it peak up."

This interest may be due to the locals' desire to bring the native catfish back to their tables. Due to a still unidentified cause, the catfish has apparently long disappeared in natural waters. Many Filipinos want it back, because they claim that the meat of *C. macrocephalus* is more tender and delicious than that of the African catfish *C. gariepinus* and the other Asian catfish *C. batrachus*. Some of the Freshwater Aquaculture Training participants from Thailand also attest to the higher prices *C. macrocephalus* command in their homeland.

AQD now receives orders twice or thrice a week for catfish fry or fingerlings from private hatcheries, fishery schools and local governments. Provincial governments are enthusiastic about restocking inland freshwater waterways with the AQD hatchery-produced fry.

AQD is collaborating with the Office of the Governor of Iloilo for the restocking program. The Catfish Project researchers and staff conducted a free lecture and hands on training on breeding, hatchery and nursery operations of the native catfish for 2

weeks in September 1999. Moreover, AQD also has a tie up with DA-BFAR to accelerate the techno-transfer of mature technologies developed, which includes catfish. This program aims to increase fish production and revenues from the aquaculture sector, and provide alternative livelihood to fisherfolks.

When asked what concerned her the most regarding the industry, Dr. Fermin remarked of hopes for the industry to pick up the catfish technology, which aside from being mature and feasible, requires less capital than the other carnivorous aquaculture species. "It is easy and can be done in one's own backyard," she pointed out.

Dr. Fermin envisions many forthcoming catfish studies. She plans to do an economics study of the catfish hatchery, as well as determine the cause of disappearance of the native catfish in the Philippines. Genetic characterization has to be done in collaboration with Dr. Zubaida Basiao of AQD's Binangonan Freshwater Station, and simultaneously, develop tagging techniques to mark the release of hatchery-bred fingerlings in natural habitats.

Her final words: "I just hope that the private sector would bear with us for a little while, because research that is tested and proven takes time to perfect. It is different when one's studies have sound scientific bases because one can be confident and sure that it will work. And this is so with the native catfish." ###

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both in Zarraga and in the gourmet restaurants of Iloilo City. This high price added to the interest in growing the fish even though it is slower growing than the *batrachus* and the *gariepinus*. The hatchery technique perfected by AQD scientists and promoted by government technicians will also stabilize the supply of seed stocks.

The provincial government is actively promoting the fish as a source of high qual-

ity and affordable protein. It has published a brochure distributed throughout the province, urging the people to grow the fish for added income from rice farm. The brochure is part of a series promoting rice-based integrated farming as a means to increase the productivity of rice farms. The Provincial Governor, Honorable Arthur Defensor, also created the Technology and Livelihood Development Center to spearhead

the access of technologies including fisheries technologies and transfer them to farmers and entrepreneurs in the Province.

#### REFERENCES

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